

### **REMARKS/ARGUMENTS**

In the Office Action, the Examiner has rejected independent claims 1-3 under 35 U.S.C. § 103(a) based on Mueller in view of Brandinger. The Examiner argues that Brandinger discloses an "arbitration unit" and that it would have been obvious to modify Mueller to include the arbitration unit of Brandinger. As will be discussed below, Applicants respectfully submit that Brandinger does not disclose an arbitration unit as claimed by Applicants. Further, Applicants respectfully submit that there would be no motivation to modify Mueller by Brandinger. Lastly, Applicants have amended claims 1-3 to more particularly claim the functionality of Applicants' arbitration unit.

In Applicants' invention, as previously claimed and as now more particularly claimed, the arbitration unit arbitrates when a laser beam is supplied to laser positioning units. As now more particularly claimed, when the laser positioning units do not finish positioning at a same time, the arbitration unit supplies the laser beam to the laser positioning unit which has finished positioning and does not yet supply the laser beam to an other of the laser positioning units which has not finished positioning. Further as claimed, the arbitration unit supplies the laser beam to a plurality of laser positioning units in a predetermined sequence when the laser positioning units finish positioning simultaneously. Thus, the arbitration unit arbitrates when the laser beam is supplied to one or more laser positioning units based on the status of the positioning of the laser positioning units. This is further described in Applicants' specification at least at paragraphs 0036-0037. Paragraph 0037 describes that a benefit of the invention is that the operating rate of the laser oscillator can be improved. Paragraphs 0002-0007 discuss the problems in the prior art.

Applicants respectfully submit that even if Brandinger discloses an "arbitration unit", it does not disclose an arbitration unit as claimed by Applicants in claims 1-3. In the Office Action, the Examiner argues that Brandinger discloses an "arbitration unit (16)". However, in Brandinger, the argued "arbitration unit (16)", or as disclosed in Brandinger the "computer 16", does not perform the functions and

steps of Applicants' claimed arbitration unit. Applicants respectfully submit that, contrary to the Examiner's statement in the Office Action that Brandinger's computer performs the claimed functions and steps, there is no disclosure in Brandinger for this functionality in computer 16. As disclosed in Brandinger, in order to solve the problem of laser beam shaping, a computer 16 merely moves the micromirror array 12 "to partially reflective positions to spatially vary the laser beam energy profile." See col. 4, lines 36-46. (emphasis added). As further disclosed in Brandinger, the "computer feeds the micromirrors through an interface board 14 to set each mirror to an angle that changes the amount of energy at each pixel in accordance with the desired beam profile." Col. 4, lines 63-66. (emphasis added). Therefore, even if the computer 16 controls the mirror, it does not arbitrate when the laser beam is supplied to one or more laser positioning units based on the status of the positioning of the laser positioning units. It merely moves the micromirrors in accordance with a desired beam profile.

Additionally, Applicants' claimed arbitration unit controls the laser positioning units independently of one another so as to perform machining at different positions from one another. Figures 1 and 3 and at least paras. 0028-0030 show and describe the arbitration unit's control of the laser positioning units so as to perform machining at different positions on the subject to be machined.

In Brandinger, computer 16 does not control the micromirrors independently of one another so as to perform machining at different positions from one another. The computer 16 merely moves the micromirrors to "modify the output beam energy profile of the laser 26." Col. 4, lines 40-41.

Therefore, Applicants respectfully submit that even if computer 16 of Brandinger can be broadly considered to disclose an "arbitration unit", Brandinger provides no disclosure for the claimed functions and steps of the arbitration unit, as claimed by Applicants. Thus, Applicants respectfully submit that even if Mueller can be modified by Brandinger, the combination still does not disclose Applicants' invention as claimed.

Applicants also respectfully submit that even if Brandinger disclosed an arbitration unit as argued by the Examiner, there would be no motivation to modify Mueller by Brandinger. As discussed above, Applicants claim an arbitration unit for controlling the laser positioning units independently of one another so as to perform machining at different positions from one another. In Mueller, machining is only performed at one location, and by one machining beam. Mueller discloses a machining beam 3. Whereas Mueller additionally discloses that a pilot beam and a measurement beam can also be used, these beams are directed at the same position as the machining beam. The pilot beam shines a point of light on a tooth surface at the location where the machining beam should be directed by the dentist and the measurement beam measures the distance from the same ablation region. Thus, machining is only performed at one location and only one laser positioning unit performs that machining. Therefore, even if Brandinger disclosed an "arbitration unit" as argued by the Examiner, there would be no motivation to modify Mueller with the arbitration unit of Brandinger because no arbitration is required in Mueller. Mueller only discloses one laser positioning unit to perform machining. Therefore, there is no need for any type of arbitration unit for the control of this single laser positioning unit that performs machining.

Applicants respectfully submit that the application is now in condition for allowance with claims 1-3 being allowable. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

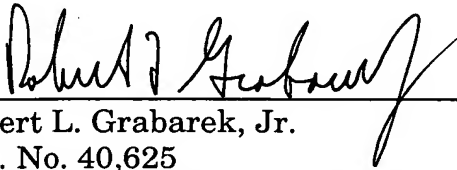
Appl. No. 10/735,858  
Amdt. Dated 04/21/2006  
Reply to Office Action of 11/21/2005

As stated above, this paper should be considered as a Petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket No. 029116.53064US).

Respectfully submitted,

CROWELL & MORING LLP

Dated: April 21, 2006

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